



Student Participation in a Community-based Flood Mitigation Project (特集 大学で実現できる国際協力に関する研究)

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Student Participation in a Community-based Flood Mitigation Project

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1. BACKGROUND

Community-based Flood Mitigation Project is oriented itself toward increasing the capacity of the community to apprehend the risk of living in flood prone areas, to introduce initiatives of cooperative forms of social organization in order to reduce increasingly the risk to flood and to plan for reducing the risks in the upcoming disaster, to take initiatives to prioritize actions and to develop project(s) necessary to reduce such risks. Community-based flood mitigation is an effort to emphasize participation among community members, stressing the values of self-help and self-sufficiency, in order to decide their own future lives in relation to living in flood prone areas.

This project, Community-based Flood Mitigation, is based on the belief that at the local level, the community, although affected by flood, own resources that can be utilized as an asset to develop the ability to deal with reducing risk of flood. Using the means of community participation, emphasizing on developing local control on the future of the community, the task of participation is to reach what is to be accomplished when there is a need to involve the citizens. This is in line with the definition of participation as “reducing the feeling of anonymity and communicate to the individual a greater degree of concern on the part of the management or administration” (Sanoff. 2000: 8). Participation here refers to a so-called genuine participation that relates with cooperation, partnership and delegation of power.

From such participation comes autonomy of power and responsibility. In their participation, members of the community can be motivated by self interests, which can increasingly dominate the narrow interest of the community. However, such interests should be replaced by a broader civic vision that penetrate social and physical barrier (Sanoff 2000: 26). Thus, it is increasingly important to seek a sense of community, a sense of unity, in order to create a sustainable community.

This project is about the need to strengthen community as an organization in order



Fig.1 Students at facilitation process

to continually reflect on the need to reduce risks of flood, to continually learn from their surroundings about the activities related to flood and related to community improvement, to increase information sharing between communities in the area, and to take initiatives in implementing the proposed solution to flood mitigation.

On the substantive matter, it is essentially an effort to disclose knowledge about flood mitigation that is embedded among the community members, to disseminate it among other members in order to enable them to be aware of problems of others, to encourage them to participate actively in building initiatives for the interest of the community.

The student acts as a facilitator that helps the community to start believe in their own capacity, to encourage them to discuss their own problem as a community, to bridge the gap on knowledge owned by the local government and those in the community, and to develop their own programs and project to help solve their own problems. The student can help the community to develop organization, mobilizing resources and implementing action. However, the student will not involve in the creation of the organization, mobilization and implementation themselves. Problems, and issues aroused from friction between community members will be left to the community to solve.

In accordance with the objective and target of this project which aims towards community independence, the scenario/action plan that need to be considered is to promote active participation from the community and local government officials to collectively participate in the process of planning, implementation, control, and the monitoring and evaluation.



Fig.2 Hazard Mapping Process with community

Community-Based Flood Mitigation (CBFM) is based on the characteristics and is one of the community development programs, with four main characteristics:

- ☐ Promote collective consciousness (of the target community) in flood disaster mitigation
- ☐ Continuous development of community organization
- ☐ Apply participative development principles
- ☐ Build the community capacity

With the above community development frame, we need to develop an approach method that encourages community participation, meaning that it places the community as the main actor of development (in flood mitigation).

Community-based development, or better known as people empowering, is implemented to “change” the community and raise their ability to analyze their conditions, find the solution that will improve them, and develop their potentials and skills in order to improve their quality of life.

Changing the community behavior require education, not in the formal form, but through a learning process done by the adults in a collective activity (Adult Education Method). In the learning process “Adult Education Method”, outside parties only act as facilitator of the learning process to share knowledge and experience.

One of the participative approach methods known to be very effective is the *Participatory Rural Appraisal (PRA)* method, or the promotion of community participation. The PRA Method was first developed by Robert Chambers, an expert in the community development. The PRA method was founded on the fact that almost every community development programs are mostly planned by the executive organizations without directly involving the community who are the target group.

2. OBJECTIVE

The objective of this project, thus, is to empower the local community to mitigate the risk of flood using affordable technology and appropriate participatory process in decision-making and implementation, in order to continue improve their livelihoods and lead a productive life. The students acts as facilitator that helps the community.

3. COMMUNITY TRAINING METHOD

There are three main elements of participative approach. The first element is the learning process between the community and facilitator (student), or between the outsider with the insider to share various knowledge and experiences that will increase awareness. The second element is the use of learning tools, which are PRA techniques to identify the various potentials and problems that exist. The final element is the output of the learning process and use of PRA techniques, which is the program/project as a short-term output and social development as the long-term output. These three main elements of participative approach are called community training process.

3.1 PRA METHOD

Directly translated, PRA means to participation and understanding of village/kelurahan. According to the terms PRA represents a group of approaches and methods that will encourage the community of a village to actively participation raising and analyzing their knowledge of their life conditions in order to create the correct action plan. This means that by implementing PRA the community is facilitated by an outside party—such as researchers, donor or officials—to analyze their life conditions that consists of existing potentials and problems in their village/kelurahan. They are facilitated to develop a program based on those existing potentials—and also the potentials available outside of their village/kelurahan that are possible to be used by the village community—to solve the problems of that community.

The creation of the PRA Method has a background of the long experience from an expert in the community development, Robert Chambers (1983), in the field of community development in various developing countries. Based on that experience, the community, especially the marginal class, such as the women, farmers, and children, must be involved in every development process. We must listen to their opinions, complaints, life experiences, hopes and analysis ability, in order for us to create a plan. They not merely the object of development, but we must also help to position them to be development actors.

According to Conyers (1984), positioning a community as the development actor is important because of three reasons. The first reason is: the community is the source for information on the conditions, needs and attitude of the local community, thus



Fig.3 The result of the project: Flood free foot path bridge

without them development programs and projects will fail because of innaccuracy. The second reason is: the community will trust a development project or program if they know the twist and turns of it. The third reason is that it is the right of the community to be involved in the community development that targets themselves.

3.2 BASIC PRINCIPLELES OF PRA

Based on the method/approach discussed above, PRA emphasize on the process of more participative study (instead of exploratory) The focus on more participative process is the paradigm of PRA. This paradigm will become obvious by understanding the following basic principles of PRA. There are at least 11 basic principles that must be referred to in the implementation of PRA, they are:

1. *Learn from the community.* The most fundamental principle in PRA is the idea that PRA is from, by and for the community. This means that PRA is built on the recognition and trust of norms, relevance of the traditional community knowledge and the community's ability in solving their problems by themselves. This principle is the reversal of the conventional method that 'teaches' the community.
2. *Students are facilitator, insiders (the community) are actors.* As the consequence of the first principle is that the outsiders need to realize that their roles are only as 'facilitators' and not 'actors, teachers, counselors or researchers'. This require modesty, the will to learn from the community and positioning the community members as the main source in understanding the conditions of the community. In the application of PRA, the community dominates the activities.
3. *Learn from and share experiences with each other.* Although there is recognition of the traditional experience and knowledge of the community, this does not mean that the community is always right and is left unchanged. Likewise, 'modern' knowledge introduced by outsiders is not always able to solve their

problems. Thus, both the experience and knowledge of the community with the experience and knowledge of outsiders, complement each other and are just as important as the other. The Process of PRA is a dialog forum between the two systems of knowledge to yield something better.

4. *Relaxing and Informal.* The PRA activity should be conducted in a flexible atmosphere, without pressure, open, and informal. This relaxed situation will promote friendship, where the outsiders will merge as a member of a discussion group, not as a stranger.
5. *Involvement of all the community groups* One mistake that is often made is the view that the leaders, community or group personage in the community can represent the whole community. This mistake will produce programs that will only satisfy the interests of certain groups and will not be supported by the community in general. Thus, in order to prevent bias and gain support from the vast community, the PRA activity must involve every class, men, women, the elders, rich-moderate-poor people and represent many villages.
6. *Respect differences.* Because the participants of PRA come from a diverse community (various classes or types), many opinions or arguments shall arise. That is why it is important to promote respect between participants. The core of the activity is to try a variety of information and not give the average output. Variation of information and problems will be organized and arranged by the community as the owner.
7. *Triangulation.* In order to get information that is reliable, we can use triangulation method, which is a form of check and recheck. Triangulation can be done by: (a) utilizing a variety and combination of PRA techniques. Each PRA technique has their advantages and disadvantages. Not all the information needed can be attained, discussed and used with one or two techniques. One PRA technique will complement another. (b) Identify the types and sources of information. The validity of each information must be carefully studied with other sources and techniques. For example, the official statistic report on the area of various types of land use in the village must be cross-checked with the village map made by the community. Problems suggested by village government officials and community personage, can be cross-checked with statements from the community during the discussion. Different views from team members with different education background will provide a more complete picture of the information and also provide deeper examination from various aspects.
8. *Optimizing the results.* The implementation of PRA activity will require time and energy from the source persons, exceptional implementation and the participation of community members, which will require funding. In order to effectively use the fund, the PRA activity should optimize its activities by focusing on things that are most important with a conclusion that is close to being correct completely, although never completely correct.
9. *Learn from mistakes.* Committing mistakes, often considered abnormal, is con-



Fig.4 The results of the project: Flood free public latrine

sidered normal in PRA. The important thing is not the perfection in the implementation, which would be difficult to achieve, but the best application according to the capacity, and then to learn from the mistakes, to improve future activities.

10. *Practical orientation.* PRA orients to solving problems and program developing. This requires relevant (logically related to the program) and sufficient information. What it needs is optimum knowledge, not every information has to be collected and studied. The principle is, the right approximation will be better than an exact but wrong conclusion, or it is better to achieve an approximation that is almost wrong than almost right. The almost-right conclusion is almost a mistake. On the contrary, the almost-wrong conclusion is almost correct.
11. *Continuous.* PRA Activities are not 'activities packet' that is completed after the information gathered is considered sufficient. Community interests and problems are ever changing and shifting according to time. Thus PRA must be comprehended by institutions and field executives.

4. THE PROJECT

There are 2 CBFM Projects, one is in Bandung, Indonesia and the other is in Jakarta, Indonesia. The projects were implemented in year of 2002 and 2003. The activities of the project are as follow:

- Reconnaissance to understand community needs in flood disaster
- Developing networks with related institutions
- Community Mobilization and training for :
- Hazard assessment
- Vulnerability assessment
- Risk reduction options

- Preparedness/emergency response
- Dissemination and socialization of activity results
- Facilitated process to developing action plan by the community
- Selecting mitigation activities to be implemented
- Implementing risk reduction and preparedness activities
- Monitoring and follow up

5. STUDENTS PARTICIPATION

The students played actively in the project. They facilitated the stakeholders and the community. The knowledge transfer is the key factor for the continuity to the community based project, in which in term of knowledge, the students have the capacity closer to them, rather than their teacher. Students Involvement in the CBFM Projects can be concluded as follow:

- ▷ Students work as part of the project team, supporting the project leader and project engineers, supporting the facilitation process, collecting primary and secondary data to support the activity, i.e. technical, social and economic data, such as maps, population and livelihood
- ▷ Project documenting of the whole process of CBFM (document preparation, reporting, photo and video documenting, etc)
- ▷ Assisting project staffs in training and facilitating process
- ▷ The students can use the project as the topic for their Final Year Project
- ▷ The students collect all the available data and information as supporting material in developing their Final Year Project, supervised by the Project Team Leaders
- ▷ The students accumulate rich experiences in the approach and implementing theoretical basis to the field works directly with the community
- ▷ Wide networks with various agencies and people involved in the project, which will help them in the future professional life
- ▷ Exposure to the international collaboration scheme and internship within the international organization who supported the projects

(クリシュナ・プリバディ)